

## **Odonata Watching in South Kerala**

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We present some observations on Odonata species carried out in three localities in South Kerala with 11 hours of field observation spanning over five days. Observations were done in two during two trips; one during 21<sup>st</sup>, 22<sup>nd</sup> and 23<sup>rd</sup> of July 2007 and another during 24<sup>th</sup> and 25<sup>th</sup> of August. Weather conditions during the entire period of first trip was “drizzling with intermittent dry breaks” while during the second trip it was sunnier with very less wet spells. This area lies south of Kuttanad where David Raju reported his observations of 45 species (David Raju 2007) and lies west of Shendurney WLS where C.G.Kiran made a list of 64 species (Kiran 2007). There is an overlap (Attingal & Varkala) among the collection locations of Emiliyamma and Radhakrishnan in Thiruvananthapuram district where they recorded 27 species and lists a total checklist of 43 species including former studies in the region (Emiliyamma & Radhakrishnan 2002). We spent just one hour altogether in this area and could locate only three species. The other known published work near this area is a list of 31 species from Kottayam district (Emiliyamma 2005) and this area lies further north of this study area. Here, we list 30 species of which 19 have been photographed to a reasonable accuracy to identify correctly. Another seven are sight records of species which we are familiar with from other localities. Four of them are unconfirmed of which one is photographed. Administratively, three species were recorded from Thiruvananthapuram district and 27 species were recorded from Kollam district.

All identifications are based on Subramanian (2005), Emiliyamma *et al.* (2005) and Emiliyamma *et al.* (2007) and common names used are from the first reference. Help was sought in DragonflyIndia for some photographs, which could not be identified using this reference, and we received identifications and confirmations from Dr.K.A.Subramanian, David Raju and Dr.Jafer Palot. Below listed are the locations and

the co-ordinates (from Google Earth) along with habitat and hours spent in each locality looking out for odonata.

Locations	Coodinates	Habitat	Time Spent
Ithikkara, Kollam District	8°51'36.01"N, 76°41'47.76"E	Paddy fields with and without stagnant water, riverside, village groves.	2.0hrs
Kalluvathukkal, Kollam District	8°49'33.50"N, 76°48'0.52"E (Approx.)	Village with some paddy fields, streamlets, ponds.	7.0hrs
Attingal, Thiruvananthapuram District	8°41'37.91"N, 76°47'50.82"E	Village on river side	0.5hrs
Nedungolam, Kollam District	8°51'39.49"N 76°41'19.14"E	Grassy meadow with lush post monsoon growth, village groves.	1.0hrs
Varkala, Thiruvananthapuram District	8°43'55.68"N 76°42'18.26"E	Temple pond not far from the sea shore.	0.5hrs

Ithikkara and Attingal were visited only during the first trip while Varkala and Nedungolam were visited only during the second trip. Kalluvathukkal was visited during both the trips.

### Annotated Checklist

**1. Orange-tailed Marsh Dart (*Ceriagrion cerinorubellum*):** Males recorded on all days from Kalluvathukkal in multiple locations during both the trips. Identification confirmed from the photographs. Pairing recorded over floating vegetation on a streamlet.

**2. Coromandel Marsh Dart (*Ceriagrion coromandelianum*):** One confirmed sighting of a male from Varkala. No photograph taken. It has been recorded earlier from Thiruvananthapuram District (Emiliyamma & Radhakrishnan 2002).

**3. Rusty Marsh Dart (*Ceriagrion olivaceum*):** One individual from Kalluvathukkal on the 3<sup>rd</sup> day of first trip. Several recorded during the second trip. Identification confirmed from photographs.

**4. *Ceriagrion rubiae* (?):** One individual with bright orange-red all over the abdomen was located near a paddy field at Kalluvathukkal during the second trip. However, the individual escaped from being photographed and it is believed to be of this species. In the absence of any common name, we propose to name it as ***Ruby Marsh Dart***.

**5. Blue Marsh Dart (*Pseudagrion microcephalum*) (?):** One individual seen near a running stream adjoining a temple at Kalluvathukkal during the first trip. Though we are familiar with this species, we could not photograph as it was drizzling and hence identification could not be confirmed.

**6. Golden Dartlet (*Ischnura aurora*):** One individual seen in a grassy meadow adjoining a temple in drizzling weather at Kalluvathukkal during the first trip. No photograph taken, however we are familiar with this species. A female damselfly possibly of this species (or of *Agriocnemis pygma* or *Agriocnemis keralaensis* pers.comm David Raju) was also photographed from Kalluvathukkal in a paddy field during the same trip.

**7. *Agriocnemis keralensis* (?):** One male of this tiny damselfly was photographed from a small grassy meadow adjoining a temple at Nedungolam in fading light in the evening. The individual was slightly smaller than a Pigmy Dartlet. Dr.K.A.Subramanian, author of Peninsular Indian Dragonflies, suggested that the identification be assumed tentative until further taxonomic work on *Agriocnemis* of Indian region to be executed. In the absence of any common name, we propose to name it as ***Kerala Dartlet*** as the species is endemic to Kerala.

**8. *Agriocnemis pieris*:** One individual photograph from Kalluvathukkal near a paddy field during the first trip. At least three individuals recorded during the second trip of which one is photographed. Another individual, which may be the female of this species or the congener *Agriocnemis splendissima* was also photographed. In the absence of any common name, we propose to call it ***Pale Blue Dartlet***.

**9. Pigmy Dartlet (*Agriocnemis pygmaea*):** A female photographed at Nedungolam.

**10. Yellow Bush Dart (*Copera marginipes*):** One female of this bright damselfly was photographed from Kalluvathukkal on a dry stream bed during the second trip while another male was photographed from Nedungolam.

**11. *Caconeura ramburi*/ *Caconeura risi*:** One individual photographed from Kalluvathukkal during the second trip is believed to be one of these species. Genus identification was confirmed by Dr.K.A.Subramanian.

**12. Emerald Spreadwing (*Lestes elatus*):** One individual photographed from Kalluvathukkal during the first trip.

**13. Black-tipped Forest Glory (*Vestalis apicalis*):** Two individuals photographed from Kalluvathukkal during the second trip.

**14. Clear-winged Forest Glory (*Vestalis gracilis*):** One individual photographed from Nedungolam and. another sighting from Kalluvathukkal during the same trip. Though two subspecies could occur in this area, racial separation was not attempted.

**15. *Brachydiplax sobrina* :** A confirmed photographed from Kalluvathukkal during the second trip and one single photograph of a male which is possibly this species from Ithikkara. Bedjanic et.al. in Sri-Lankan Dragonflies book calls it ***Sombre Lieutenant***.

**16. Asiatic Bloodtail (*Lathrecista asiatica*):** A teneral photographed from Nedungolam.

**17. *Orthetrum chrysis* :** Photographs made of a single individual at Kalluvathukkal during the second trip. Bedjanic et.al. calls it *Spine-tufed Skimmer*.

**18. *Orthetrum luzonicum*:** Three sightings from Kalluvathukkal during the second trip and all of them captured as photographs. Bedjanic et.al. calls it *Marsh Skimmer*.

**19. Crimson-tailed Marsh Hawk *Orthetrum pruinsum*:** One single sighting at Varkala. Though no photograph was taken, we are familiar with this species from elsewhere. It has been recorded earlier from Thiruvananthapuram District (Emiliyamma & Radhakrishnan 2002).

**20. Green Marsh Hawk (*Orthetrum sabina*):** One sighting at Ithikkara and several sightings at Kalluvathukkal during both the trips. Though no photographs were taken, we are familiar with this species.

**21. Blue Marsh Hawk (*Orthetrum glaucum*):** One female photographed from Kalluvathukkal during the second trip.

**22. Yellow-tailed Ashy Skimmer (*Potamarcha congener*):** One male photographed from Kalluvathukkal sitting over an abandoned pond during the second trip.

**23. Ruddy Marsh Skimmer (*Crocothemis servilia*):** One sighting of male from Ithikkara. No photograph taken but we are familiar with this species.

**24. Ground Skimmer (*Diplocodes trivialis*):** Two individuals photographed. One from Kalluvathukkal during the first trip and another from Nedungolam. Also two separate sightings from Ithikkara.

**25. *Diplacodes nebulosa*:** One individual photographed from Nedungolam. Bedjanic et.al. calls it *Black-tipped Percher*.

**26. Pied Paddy Skimmer (*Neurothemis tullia*):** Extremely common at Ithikkara and Kalluvathukkal. Several sightings of male and female dragonflies were made and both were covered by photographs.

**27. Common Picturewing (*Rhyothemis variegata*):** Male and female dragonflies are reasonably common around Ithikkara but no photographs were taken. One female was photographed from Kalluvathukkal during the second trip.

**28. Wandering Glider (*Pantala flavescens*):** At least two individuals noted in the air from Ithikkara – not all the flying dragonflies could be checked but more of them are believed to be present. No photograph taken.

**29. Black Marsh Trotter (*Tramea limbata*):** One very active individual noted at Kalluvathukkal flying over a rain-water overflow channel but never perching. Though good photographs could not be taken, the characteristics match well with this species.

**30. Scarlet Marsh Hawk (*Aethriamanta brevipennis*):** One individual seen and photographed at Attingal. It has been recorded earlier from Thiruvananthapuram District (Emiliyamma & Radhakrishnan 2002).

The following (Table 1) is the species list in summary from different localities.

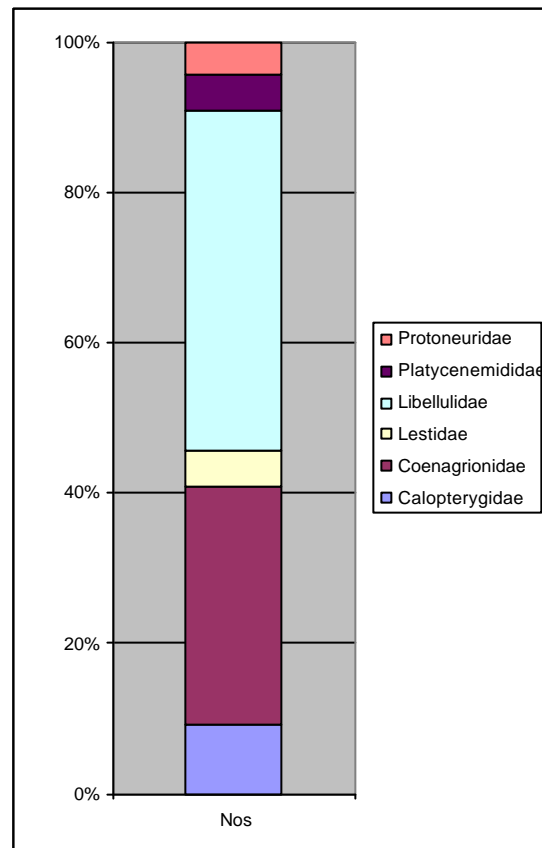
**Table 1: A Triplist of Odonata of South Kerala**

Species	Family	ITHK	KALL	ATT	NED	VAR
<i>Agriocnemis keralensis</i>	<i>Coenagrionidae</i>				?	
<i>Agriocnemis pieris</i>	<i>Coenagrionidae</i>		X			
<i>Agriocnemis pygmaea</i>	<i>Coenagrionidae</i>		?		X	
<i>Ceriagrion cerinorubellum</i>	<i>Coenagrionidae</i>					X
<i>Ceriagrion coromandelianum</i>	<i>Coenagrionidae</i>		X			
<i>Ceriagrion olivaceum</i>	<i>Coenagrionidae</i>		X			
<i>Ceriagrion rubiae</i>	<i>Coenagrionidae</i>		?			
<i>Ischnura aurora</i>	<i>Coenagrionidae</i>		X			
<i>Pseudagrion microcephalum</i>	<i>Coenagrionidae</i>		?			
<i>Copera marginipes</i>	<i>Platycenemididae</i>		X		X	
<i>Caconeura ramburi</i>	<i>Protoneuridae</i>		?			
<i>Lestes elatus</i>	<i>Lestidae</i>		X			
<i>Vestalis apicalis</i>	<i>Calopterygidae</i>		X		X	
<i>Vestalis gracilis</i>	<i>Calopterygidae</i>		X			

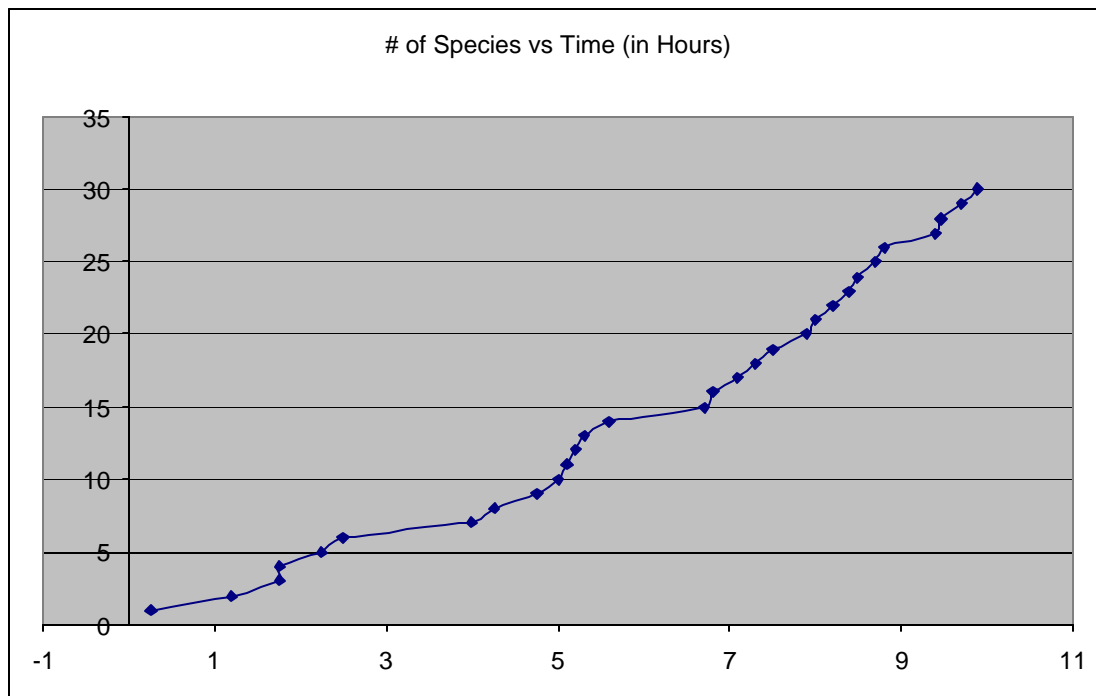
<i>Aethriamanta brevipennis</i>	<i>Libellulidae</i>			X		
<i>Barchydiplax sobrina</i>	<i>Libellulidae</i>	?	X			
<i>Crocothemis servilia</i>	<i>Libellulidae</i>	X				
<i>Diplacodes nebulosa</i>	<i>Libellulidae</i>				X	
<i>Diplacodes trivialis</i>	<i>Libellulidae</i>	X	X		X	
<i>Lathrecista asiatica</i>	<i>Libellulidae</i>				X	
<i>Neurothemis tullia</i>	<i>Libellulidae</i>	X	X			
<i>Orthetrum chrysis</i>	<i>Libellulidae</i>		X			
<i>Orthetrum luzonicum</i>	<i>Libellulidae</i>		X			
<i>Orthetrum glaucum</i>	<i>Libellulidae</i>		X			
<i>Orthetrum pruinatum</i>	<i>Libellulidae</i>					X
<i>Orthetrum sabina</i>	<i>Libellulidae</i>	X	X			
<i>Pantala flavescens</i>	<i>Libellulidae</i>	X				
<i>Potamarcha congener</i>	<i>Libellulidae</i>		X			
<i>Rhyothemis variegata</i>	<i>Libellulidae</i>	X	X			
<i>Tramea limbata</i>	<i>Libellulidae</i>		X			

**Legend:** ITHK: Ithikkara, KALL: Kalluvathukkal, ATT: Attingal, NED: Nedungolam, VAR: Varkala

Included the distribution pattern of different families at Kalluvathukkal where majority of the time was spent in the field. The families *Libellulidae* and *Coenagrionidae* are well represented in this locality.



The species accumulation curve during the trip is also included. The curve has not flattened off indicating that the coverage is far from complete.



All the photographs taken during the trip is uploaded in the following link.

<http://picasaweb.google.com/paintedstork/SouthKeralaOdonata>

### Acknowledgements

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